2435, Attica Consolidated School Corp

PROJECT ABSTRACT

Educators face obstacles unique to the digital natives of the 21st Century. We must create a learning environment that matches the learning styles of these students. At Attica Schools we have struggled to find methods of teaching that engage students and create an intrinsic desire to learn. Creating opportunities for teachers to expand their instructional practices using the tools of the 21st Century classroom will engage our students and create a positive, successful learning environment.

Attica Elementary School will establish a 21st Century Learning Lab equipped with a laptop cart with lab management software, projector, wireless interactive tablets designed for the classroom, student response systems, document camera, and sound system. This Learning Lab will be available for all grade levels to enhance instruction in all curricular areas, emphasizing increasing engagement in Reading, Language Arts, and Math instruction. The Learning Lab will enable teachers to utilize interactive instruction for daily lessons as well as research projects, writing projects, presentations, science demonstrations, experiments, and math activities. A second laptop cart of netbooks will be purchased for our downstairs with grades kindergarten, first, and second. The netbooks will be more manageable in size and weight for the younger students. Our downstairs does not have a room available for another computer lab to supplement daily instruction. A cart of netbooks will enable those grade levels to incorporate the interactive instruction and projects using 21st Century Technology. An interactive whiteboard will also be purchased for a second grade classroom. This whiteboard will enable more in-depth integration of technology into another primary classroom. We will equip five classrooms with mounted LCD-projectors. This will allow the use of the wireless interactive tablet and student response system to be used in those classrooms as well. One additional LCD projector will be mobile to use with the wireless interactive tablets and student response systems for teachers without a stationary projector. Classroom teachers will then be able to incorporate interactive demonstrations using online video-streaming, interactive websites, presentation software, and so on.

Attica Jr-Sr High School will utilize a mobile laptop cart with lab management software for use in math and science classrooms, graphing calculators for math and science classrooms, and Labquest Interface software and Probeware for science labs. A mobile laptop cart is necessary due to the space and energy requirements. Mobile laptop cart will be used to extend the current use of math software into the classroom setting on a more regular basis than just when limited space is available in our current labs. We have had great success utilizing remediation software for ISTEP+ and ECA remediation and additional computer access will provide even greater opportunity for remediation and enrichment activities. Data collection technology software and hardware will be utilized with graphing calculators in both math and science classrooms.

Just putting this equipment in our schools and classrooms is not enough to engage our students. We must support our current staff in effective utilization of this technology so that it is used effectively and often, especially teachers in the areas of Math, Reading and STEM related courses with the emphasis on increasing student performance and involvement in and preparation for higher level courses available

through our extensive list of available AP courses. Therefore, we will create staff development opportunities over the entire school year to demonstrate how the technology is used, plan for ways to use the technology in the classroom, and share the successes with the entire staff. We will monitor student performance through ISTEP+, End of Course Assessments, DIBELS, ACUITY, STAR Reading Assessment, and AP exam scores and participation rates.

NEEDS/BASELINE

Four of the last five years the percentages of Attica Consolidated School Corporation students passing the language arts portion of the ISTEP+ and the math portion of the ISTEP+ have been below state average. At Attica Elementary School in 2008-2009, only 59% of the 3rd graders passed the math section of the ISTEP+ compared to the state average of 71%. In the 4th grade, 68% passed the language arts section and 65% passed the math section of the ISTEP+, compared to the state-average of 74%. In the 5th grade, 72% passed the language arts section and 76% passed the math sections, compared to the state averages of 75% and 78%, respectively.

During the 2008-2009 school year, 62.3% of Attica High School students passed the ISTEP+ test while 73.7% was the state average. The percentage of tenth graders passing the language arts portion of the test was 52% in 2008-09 with only 39% of the students on the free and reduced lunch program passing the test. There are 39% of the Attica students who are on free and reduced lunch status. The difference between the scores of students on free/reduced and paid lunch status on the language arts portion of the 10th grade ISTEP is 18 percentage points on Reading Comprehension, Literary Response and Analysis, Writing Applications, and Language Conventions and 16 percentage points on the writing process. The ISTEP+ passing percentage on the language arts portion of the test was 10 or more percentage points lower than the percentage passing statewide for seventh and eighth graders.

Only 58% of the Attica tenth grade students passed the math portion of the ISTEP+ in 2008-2009 compared to 66% passing statewide. There were only 69% of the seventh graders passing the math portion of the ISTEP+ compared to 82% of students statewide in 2008-2009. In the 8th grade, 58% of Attica students passed the language arts portions and 69% passed the math portions of the ISTEP+ compared to the state averages of 69% and 75% respectively.

The percentage of Attica students earning an Academic Honors Diploma has been significantly lower than the State average except for one year since 1994-95 school year. The percentages earning an Academic Honors Diploma in the last five years are 22%, 26%, 17%, 15%, 14%. The percentage of students taking AP courses has been at or above the state average while the percentage of students taking AP courses and scoring a 3 or higher has been well below the state average with only 33% of Attica students scoring at or above a 3 on the exam while the state average was 50%.

GOALS/OBJECTIVES

One of the major goals for students K-12 will be to increase student engagement in learning. To measure engagement, survey data of students, teachers and parents will be compared. We will additionally increase students' experiences with 21st Century Technology Tools and improve upon those

skills. Student academic achievement will increase due to the increased engagement in the classroom due to the increased amount and frequency of technology integration. ISTEP+ and ACUITY scores at the elementary will improve in all areas due to the students' interest and engagement in the classroom in the areas of reading, math, and science.

Another goal is to increase student achievement on math End of Course Assessments and/or the percentage of students passing or achieving pass+ scores on ISTEP+. A goal is to increase student achievement in language arts as measured by end of course assessments in English and/or percentage of students passing or achieving pass+ on the ISTEP+. Another goal is to increase student achievement on the biology end of course assessment and/or the percentage of students passing or achieving pass+ scores on ISTEP+.

Using Acuity assessments to guide instruction is a necessary goal leading to improved academic achievement in the areas of math, language arts and the sciences. Increasing student enrollment in upper level science and technology courses, specifically Project Lead the Way and Advanced Placement courses, is a goal related to increased percentages earning a Core 40 and/or Academic Honors Diploma.

A supportive goal is to improve reading skills directly related to reading in the content area as measured by Lexile scores and/or Renaissance STAR Reading scores. To increase student participation, another supportive goal is to develop online AP courses available for home schooled students or other students in the area or in neighboring school corporations. Attica Junior-Senior High school currently provides more AP courses to our students than most similarly sized schools. Opening those courses up to home schooled students or students from neighboring schools will allow us to continue to offer the large number of AP courses currently available to our students. Additionally, the percentage of students taking AP courses and achieving a 3, 4, or 5 score on AP exams will increase.

METHODS/ACTIVITIES

Attica Elementary School will use the new technology to supplement all curricular areas, with an emphasis on Science, Math, and Reading. Scheduling time in the computer lab has been difficult and the addition of the learning lab and laptop carts will enable more teachers to utilize technology during their lessons and increase student engagement in the classroom as a result.

The learning lab equipped with laptops, student response system, sound system, document camera, and wireless interactive tablets will be used by those teachers receiving new technology daily. Additionally, these teachers will work in cooperation with the Attica Technology Integration Specialist to design and implement one project the first and second grading periods, and two projects during the third and fourth grading periods. Additionally, all classrooms will have access to this learning lab to supplement the regular curriculum. It will be used for science demonstrations, science lessons, math lessons, and math activities.

A cart of netbooks will be available to all classrooms K-2 to integrate technology tools and interactions into the regular classroom. Six classrooms will be equipped with LCD projectors to utilizing the wireless

interactive tablets and the student response system. Teachers will be able to easily incorporate video-streaming, electronic presentation software, interactive lessons with the student response systems and wireless interactive tablets.

Attica Junior-Senior High School will use mobile laptops carts loaded with The Geometer's Sketchpad software to provide teachers with the ability to provide a visual method of exploring and understanding geometry concepts. This enrichment activity is designed to stimulate engagement in the curriculum and encourage continued involvement in higher level mathematics courses leading to AP course enrollment.

ALEKS is scheduled to be used for remediation of students in grades 7-8 and for students that have failed the Core 40 Algebra assessment or GQE. Mobile laptop carts will provide additional access to computers during those remediation courses and will provide for the opportunity to utilize ALEKS in other courses for enrichment. The major focus of this remediation and enrichment opportunity is to increase student achievement on ISTEP+ and End of Course Assessments (ECA).

Graphing calculators will be used in conjunction with data collection hardware and software to analyze various values. Students will be able to learn visually and intuitively, predict before data collection, utilize a variety of real time data displays and readouts and analyze data and collect statistics on data. This enrichment activity will be added to math and science classrooms to stimulate engagement and encourage higher level thinking skills. This equipment will encourage students to become involved in higher level courses in mathematics and science leading to higher AP course enrollment.

Through the use of SMART Board technology teachers will be encouraged to develop interactive lessons that will stimulate and engage students in learning activities.

Increasing student success on ISTEP+, ECA, and in dual credit or AP courses will rely on the accurate interpretation of data, ability to modify curricula to the needs of individuals or groups, and continued monitoring of performance and response to intervention. The purchase of STAR Reading Assessment will provide the opportunity to assess student reading performance, address reading in the content area and identify improvements in reading skills. This software, in conjunction with assessment and/or intervention tools already in use will provide opportunities to remediate or enhance classroom instruction based upon individual needs of all students.

PROFESSIONAL DEVELOPMENT

Attica Schools have designed a professional development plan that includes 29 hours of professional development activities throughout the school year. This includes two 3-hour blocks of time after school in the fall and spring along with one and two hour blocks of professional development time monthly. Individual staff members will also be utilizing non-scheduled time to work on professional development projects. Three major focus areas for professional development will be in place for the school year. Those focus areas include facilitating learning with technology, developing data-driven decision-making in the classroom and reading in the content area.

Attica Elementary School teachers will be provided with training for the integration of these tools into their classrooms. A Technology Integration Specialist will provide after school training monthly during sessions beyond the agreed upon 29 hours of staff development time. Teachers will receive stipends for attending these training sessions. At these sessions, teachers will develop lessons, practice using the new technology, share examples of successful lessons, and view modeled lessons. These teachers will prepare one project utilizing the new technology for the first and second grading periods, and two projects for each of the third and fourth grading periods. This will provide a great foundation for integrating technology. Additionally, it will provide great examples to the entire staff for future integration into their classrooms.

The first step of facilitating learning with technology will be to provide professional development for teachers beginning immediately after installation of the new technologies. A train the trainer approach will be utilized by providing training for all teachers initially selected for use of the equipment with follow up training offered by the initial users to the remainder of the staff. Through this process, teacher trainers have the ability to share their successes, provide effective support to fellow teachers and develop activities designed to increase student performance. In addition, AP instructors will be trained on the development of online courses that may be offered to AP partner schools interested in enhancing the availability of AP courses. Moodle is currently used to develop blended courses that allow online interactions in a lab/teaching environment. This training will be designed to focus on the development of full online coursework that would permit students to take courses when scheduling conflicts occur or offer courses to AP partner schools.

It is apparent through our corporation's current performance on standardized tests and classroom performance that reading in the content area is an area of concern. STAR Reading Assessment will provide an opportunity to continue to assess student performance in reading using quick assessments on all students on a regular basis. Professional development activities are being planned starting in March 2010 that will provide teachers with an opportunity to work with a reading specialist through blended activities that include face-to-face meetings and online activities and discussion with university professors specializing in reading. Developing an understanding of reading in the content area is a critical component of data-driven decision-making that can have an impact on all students in the school corporation.

It has become increasingly evident that though Attica Consolidated Schools uses data to develop plans for remediation, we must increase the utilization of data to drive instruction. A series of professional development activities will revolve around data-driven decision-making. The initial training will take place during professional development sessions in February 2010 and continue for the remainder of the school year utilizing Moodle activities that provide guided learning activities and opportunities to discuss issues and ideas through forums and discussion boards.

FORMATIVE/SUMMATIVE EVALUATION

A detailed timeline of professional development activities will be provided to all staff at the start of the school year. Professional development plan will clearly identify the focus area of professional

development, the goals and objectives and the anticipated outcomes of each session of professional development activities. An evaluation of each session relating to the three major focus areas of professional development plan will be completed by participants and changes or modifications to future sessions will occur if the anticipated outcome for each session has not been met. The professional development plan will be monitored for implementation monthly and changes or upgrades to the plan will be provided as they become available.

Use of hardware; such as computer labs, student response systems, wireless interactive tablets, data collection technology and graphing calculators will be monitored monthly through a checkout system. Under usage will result in additional professional development as needed.

STAR Reading Assessment data will be compiled at the start of the school year for each student in grades K-12. This initial data will be compared to end of year data to see what level of improvement has been made in reading performance for each student. It is unfortunate that no baseline data will be available to look at student reading performance prior to a focus on reading in the content area. It would however be expected that first year data will show lesser gains than second year data since professional development relating to reading in the content area will not be fully implemented until students enter year two of the project.

Student activity in ACUITY, My Skills Tutor and ALEKS will be monitored monthly.

Percentage of students involved in AP courses will be monitored yearly as will the number of AP students receiving a 3, 4, or 5 on the AP exam.

Data relating to Pass and Pass+ completion of ISTEP+ will be collected and the start of the school year and compared from year to year as will End of Course Assessment (ECA) pass rates. It would be anticipated that with the focus on remediation in earlier grades more students will be able to pass the ECA on their first attempt.

LOCAL MATCH

$55,879

The local Parent/Teacher Council has agreed to support the Accelerated Reader/STAR Reading program by contributing $1000 annually for its use. A technician will be hired to help install the projectors and perform ongoing maintenance for the increase in hardware, specifically 120 new computers; cost will be approximately $20,000. The corporation has a Technology Integration Specialist who works with teachers to model and develop the use of technology tools in instruction. She will be provided stipends for increased staff development as outlined in the professional development portion, $2500. She will be providing assistance during the normal school day also. An estimate of her time with this project is approximately 25%, $12,000 minimally. The corporation maintenance director is a certified electrician. He will provide the electrical work for the new hardware, assisted by his maintenance assistant, minimum of $6000.

Southwest Parke will be buying additional equipment and professional with their matching funds. Additional projects and wireless tablets will be the specific items purchased. They calculate they will be spending and additional $14,379.

PARTNERSHIPS

At Attica Consolidated School Corporation we understand the importance of learning from experienced professionals. It is important to make sure that the implementation of our equipment and software be as seamless as possible. For this reason, we would like to partner with Southwest Parke Community School Corporation (SWPCSC) where they have implemented mobile carts into each school. It is our plan to have SWPCSC provide professional development with our staff on how to best utilize our new equipment in order to effectively instruct our students. In return, we will be providing SWPCSC insight on how best to implement wireless tablets into classroom instruction. This partnership will serve as a short-term solution for professional development needs, but will hopefully allow us to develop long-term relationships in order to continue to learn from each other in the future.

We have used Skype to collaborate on this grant and anticipate that we will set up sessions between classes and students and between teachers. Both schools use similar software and will collaborate on the usage of the software. Specifically, both schools are using Moodle both for classrooms and staff development and both schools are using ALEKS.

Attica Consolidated School Corporation will provide opportunities for teachers to take continuing education courses supporting the goals of the grant through Indiana universities. Specifically, course will be offered to improve technology integration and reading in the content areas. The courses will be offered on the school corporation site and made available for staff from neighboring school corporations. Indiana Wesleyan University offers courses in the area of technology integration and Ball State University offer courses in the areas of reading in the content area. Initial efforts are in place to bring Dr. Karen Ford of Ball State University to Attica Consolidated Schools to present a series on content literacy in the classroom in a blended format of face-to-face meetings and work online followed by feedback and discussion about the strategies teachers develop and implement in the classroom.